



MARK-UP COPY OF AMENDED CLAIMS

- 1 11. **(AMENDED)** A method of designing a roller cone drill bit, the
2 steps of comprising:
3 (a) calculating the force balance conditions of a bit;
4 (b) defining design variables;
5 (c) determine lower and upper bounds for the design variables;
6 (d) defining objective functions mathmatically as a function of said
7 design variables;
8 (e) defining constraint functions mathmatically as a function of said
9 design variables;
10 (f) performing an optimization means; and,
11 (g) evaluating an optimized cutting structure by modeling.

Please cancel Claims 1-10 and 12-13.

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[illegible]